

Application Serial No. 10/817,125

REMARKS**Introduction**

Claim 23 has been amended. The application continues to include claims 1-29. In view of the examiner's earlier restriction requirement, applicants retain the right to present claims 30-33 in a divisional application.

Applicants acknowledge that claims 9 and 29 would be allowable if rewritten in independent form. However, reconsideration of the rejection of the application is respectfully requested in view of the above amendment and the following remarks.

Objected Claim 23 Has Been Amended

Claim 23 is objected to because of informalities. In response, claim 23 has been amended and applicants respectfully request that the objection be withdrawn.

The Claims are Allowable over the Prior Art Because the Prior Art Fails to Disclose a Screw Having a Channel that Receives a Ball Collet

Claims 1, 6, 8 and 23-24 are rejected under 35 U.S.C. § 102(b) as being anticipated by Tatar (U.S. Pat. No. 5,910,142). Claims 2 and 3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tatar in view of Doubler et al. (U.S. Pub. No. 2005/0070899). Claims 4, 7 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tatar in view of Brace et al. (U.S. Pat. No. 6,187,005). Claims 12-16, 20-22 and 25-26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tatar in view of Ferree (U.S. Pat. No. 6,802,844). Claims 10-11 and 17-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tatar in view of Gearin (U.S. Pat. No. 3,530,548). Finally, claims 17-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tatar in view of Gearin (U.S. Pat. No. 3,530,548). Reconsideration

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of these rejections is respectfully requested because the prior art fails to disclose a screw having a channel that receives a ball collet.

One embodiment of the present invention is a pedicle screw assembly that includes a pedicle screw 100. The head or yoke portion 104 of screw 100 includes a plurality of threaded posts 106a, 106b that define a cylindrical channel 108. A ball collet 200 is seated in channel 108 when the assembly is in an assembled state. Because channel 108 is formed on screw 100, screw 100 is a one-piece design, which is advantageous.

Tatar discloses a pedicle screw assembly which includes a screw 100 having a head 104 that includes a recess 110 (col. 5, ll. 1-8). However, recess 110 is not designed for receiving a ball or ferrule 130. Rather, "[t]he recess 110 is bifunctional insofar as it includes a slot 112 or other suitable screw driving tool receiving conformation as well as a curvately concave circumferential lip 114" (col. 5, ll. 8-11).

Unlike the present invention, the assembly of Tatar further includes a separate body element 120. Body element 120 includes a channel 123 that receives a rod 150 and ferrule 130 (col. 5, ll. 13-18). Body element 120 is placed over head 104 of screw 100, but is a separate piece from screw 100, and is even able to rotate relative to screw 100:

The bottom opening 128 of the axial bore 122 is larger than the shaft 102 of the screw 100, but is less than the diameter of the head 104, so that the head can be nested in the socket 126 at the bottom of the bore 122, with the undersurface 106 of the head 104 slidably (initially) nested against the tapered interior surface 126. The corresponding geometries permit ***the screw 100 to polyaxially rotate relative to the body 120*** without disrupting the overall nesting of the head 104 in the socket 126.

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(col. 5, ll. 27, 34, emphasis added). The additional cited prior art fails to disclose a pedicle screw in which a collet is placed in a channel that is formed in the screw head so that the screw is one-piece.

In contrast to Tatar and the other cited prior art, independent claim 1 recites "a pedicle screw having a pair of spaced-apart threaded posts extending along a longitudinal axis thereof and **defining a channel therebetween**" and "the ball collet is **seated in the channel**". For at least these reasons, claim 1 should now be allowable.

Independent claims 17, 20, 23, 25 and 29 include similar limitations as claim 1. Based at least on the foregoing, these claims should also be allowable. The remaining claims each depend from one of the above independent claims, and therefore should also be allowable based at least on the foregoing reasons.

Conclusion

Applicants respectfully request favorable action in connection with this application.

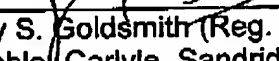
The Examiner is invited and urged to contact the undersigned to discuss any matter concerning this application.

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No fee is believed to be due for this submission. Should a fee be required, the Commissioner is authorized to charge any such fee to Womble Carlyle's Deposit Account No. 09-5028.

Respectfully Submitted,

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